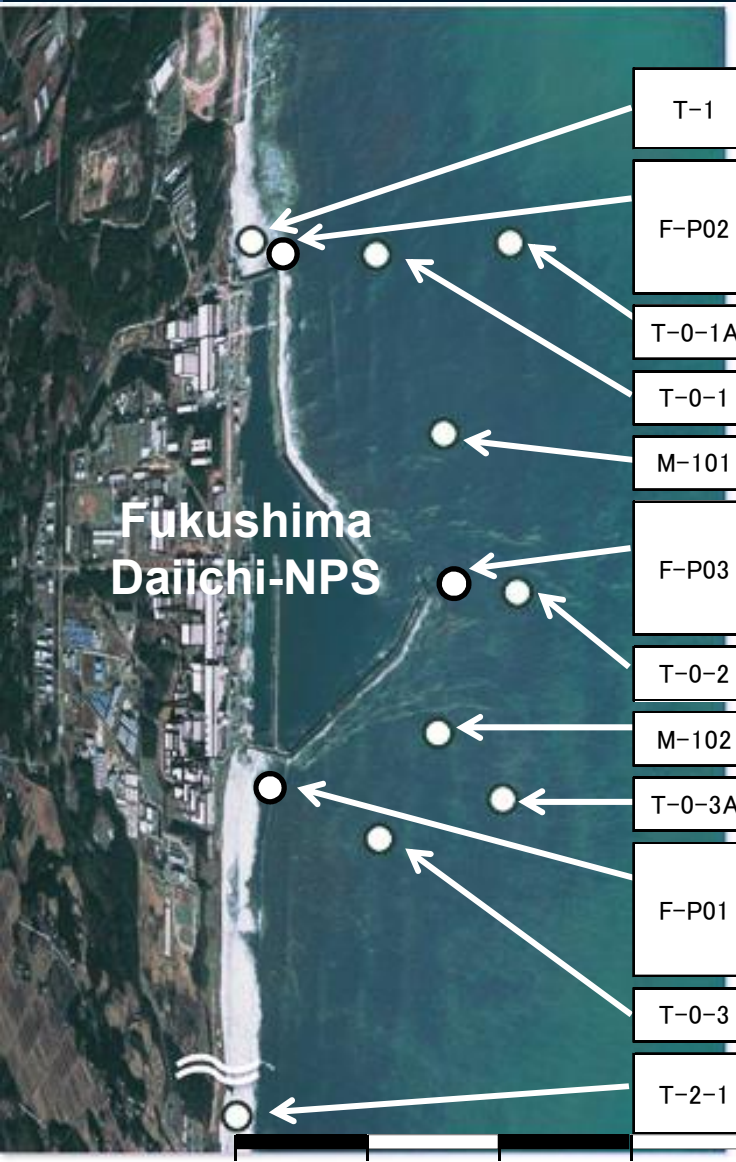


Sea Area Monitoring

December 16, 2014

Nuclear Regulation Authority (NRA), Japan

Sea area within 2km radius from the NPS



Fukushima Daiichi-NPS

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+Pu-240
----------------	---------------	--------	--------	---------------	-----	-------	----------------	--------	---------------

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*1: Total β : including K-40 *2: Total β : excluding K-40

T-1	2014/12/2	ND(0.81)	ND(0.53)	14 ^{*1}	ND(1.6)				
	2014/10/21	ND(0.69)	ND(0.83)					ND(5.1×10^{-6})	(9.4 ± 2.2) $\times 10^{-6}$
	2014/10/20	ND(0.66)	ND(0.62)	13 ^{*1}	ND(1.5)	0.030	ND(2.0)		
F-P02	2014/11/10	0.066	0.18	0.04	In progress	In progress		In progress	In progress
	2014/10/20	ND(0.056)	ND(0.054)	0.04 ^{*2}	ND(0.45)	In progress		In progress	In progress
	2014/9/16	0.13	0.35	0.14 ^{*2}	0.84	0.17		ND(6×10^{-6})	ND(6×10^{-6})
	2014/8/20	0.13	0.40	0.31 ^{*2}	2.5	0.44		ND(6×10^{-6})	ND(6×10^{-6})
T-0-1A	2014/12/4	ND(0.73)	ND(0.53)	ND(17) ^{*1}	In progress				
	2014/11/29	ND(0.70)	ND(0.62)	ND(17) ^{*1}	ND(1.8)				
T-0-1	2014/12/4	ND(0.68)	ND(0.73)	ND(17) ^{*1}	In progress				
	2014/11/29	ND(0.59)	ND(0.54)	ND(17) ^{*1}	ND(1.8)				
M-101	2014/10/20	0.10	0.33		1.7	In progress			
	2014/9/13	0.040	0.12		0.17	0.019			
F-P03	2014/11/10	0.13	0.36	0.17 ^{*2}	In progress	In progress		In progress	In progress
	2014/10/20	0.11	0.33	0.08 ^{*2}	0.61	In progress		In progress	In progress
	2014/9/16	0.35	0.94	0.23 ^{*2}	2.5	0.40		ND(8×10^{-6})	ND(8×10^{-6})
	2014/8/20	0.12	0.25	0.19 ^{*2}	1.1	0.26		ND(6×10^{-6})	ND(6×10^{-6})
	2014/7/7	0.24	0.72	0.38 ^{*2}	2.6	0.66		ND(7×10^{-6})	ND(7×10^{-6})
T-0-2	2014/12/4	ND(0.69)	ND(0.75)	ND(17) ^{*1}	In progress				
	2014/11/29	ND(0.76)	ND(0.67)	ND(17) ^{*1}	ND(1.8)				
M-102	2014/10/21	0.015	0.050		0.12	In progress			
	2014/9/12	0.039	0.12		0.13	0.010			
T-0-3A	2014/12/4	ND(0.47)	ND(0.70)	ND(17) ^{*1}	In progress				
	2014/11/29	ND(0.70)	ND(0.59)	ND(17) ^{*1}	ND(1.8)				
F-P01	2014/11/10	ND(0.065)	0.098	0.03 ^{*2}	In progress	In progress		In progress	In progress
	2014/10/20	ND(0.067)	0.054	0.04 ^{*2}	ND(0.45)	In progress		In progress	In progress
	2014/9/16	0.060	0.14	0.04 ^{*2}	0.51	0.009		ND(9×10^{-6})	ND(7×10^{-6})
	2014/8/20	ND(0.060)	ND(0.053)	0.03 ^{*2}	ND(0.41)	0.003		ND(6×10^{-6})	ND(6×10^{-6})
	2014/7/7	ND(0.064)	ND(0.068)	0.04 ^{*2}	ND(0.42)	0.004		ND(7×10^{-6})	7×10^{-6}
T-0-3	2014/12/4	ND(0.74)	ND(0.76)	ND(17) ^{*1}	In progress				
	2014/11/29	ND(0.69)	ND(0.70)	ND(17) ^{*1}	ND(1.8)				
T-2-1	2014/12/2	ND(0.74)	ND(0.65)	14 ^{*1}	ND(1.6)				
	2014/10/21	ND(0.81)	1.1	11 ^{*1}				ND(5.3×10^{-6})	(1.2 ± 0.25) $\times 10^{-5}$
	2014/10/20	ND(0.76)	ND(0.60)	14 ^{*1}	ND(1.5)	ND(0.0089)	ND(2.0)		

0 0.5 1km

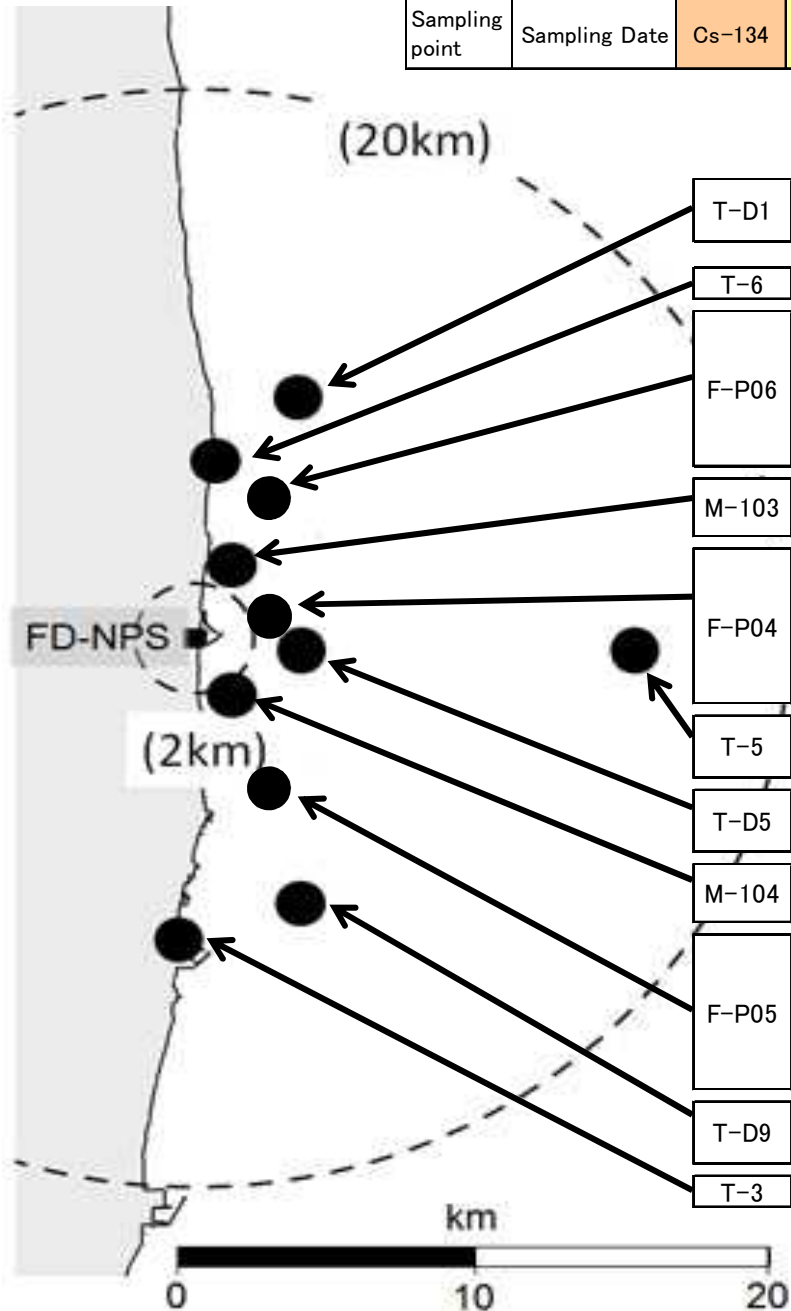
Sea area between 2-20km radius from the NPS (1)

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+Pu-240	S	S:2m below sea level
											Depth(m) from sea level

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*1: Total β : including K-40 *2: Total β : excluding K-40



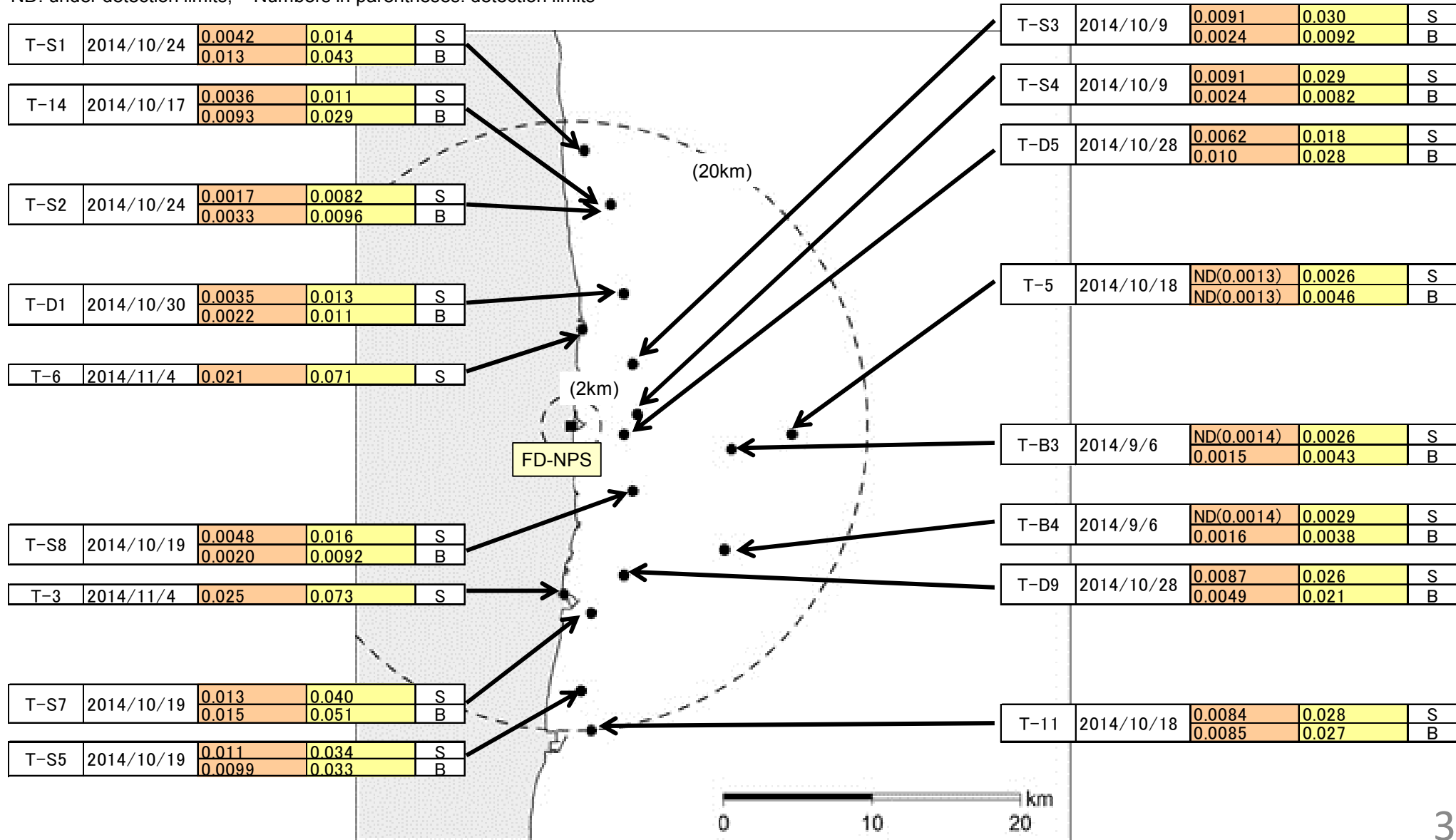
T-D1	2014/10/8	0.022	0.070						ND(6.2×10^{-6})	$(5.5 \pm 1.7) \times 10^{-6}$	S
	2014/10/1	0.0033	0.0087	ND(17) ^{*1}	ND(0.32)	ND(0.009)	ND(1.9)				S
T-6	2014/10/16	0.077	0.23	ND(17) ^{*1}	ND(0.30)						S
F-P06	2014/11/10	ND(0.065)	ND(0.065)	0.03 ^{*2}	In progress	In progress			In progress	In progress	S
	2014/10/20	ND(0.056)	ND(0.049)	0.03 ^{*2}	ND(0.45)	In progress			In progress	In progress	S
	2014/9/16	ND(0.053)	ND(0.046)	0.04 ^{*2}	ND(0.42)	0.001			ND(1.3×10^{-5})	ND(1.0×10^{-5})	S
	2014/8/20	ND(0.056)	ND(0.067)	0.03 ^{*2}	0.91	0.003			ND(8×10^{-6})	ND(8×10^{-6})	S
	2014/7/7	ND(0.056)	ND(0.051)	0.02 ^{*2}	ND(0.42)	0.003			ND(5×10^{-6})	6×10^{-6}	S
M-103	2014/10/20	0.0068	0.020		0.10	In progress					0.5m
	2014/9/13	0.016	0.052		0.10	0.0011					0.5m
F-P04	2014/11/10	ND(0.080)	ND(0.054)	0.03 ^{*2}	In progress	In progress			In progress	In progress	S
	2014/10/20	ND(0.062)	0.092	0.03 ^{*2}	ND(0.45)	In progress			In progress	In progress	S
	2014/9/16	ND(0.061)	0.058	0.03 ^{*2}	ND(0.43)	0.005			ND(6×10^{-6})	ND(6×10^{-6})	S
	2014/8/20	ND(0.065)	ND(0.055)	0.03 ^{*2}	0.43	0.002			ND(1.9×10^{-5})	ND(1.9×10^{-5})	S
	2014/7/7	ND(0.065)	ND(0.065)	0.04 ^{*2}	ND(0.42)	0.004			ND(5×10^{-6})	ND(5×10^{-6})	S
T-5	2014/10/18	ND(0.0013)	0.0026						ND(5.4×10^{-6})	$(6.6 \pm 1.8) \times 10^{-6}$	S
	2014/10/2	ND(0.0017)	0.0030	ND(17) ^{*1}	ND(0.32)	ND(0.009)	ND(1.9)				S
T-D5	2014/10/8	0.024	0.067						ND(6.1×10^{-6})	$(8.4 \pm 2.2) \times 10^{-6}$	S
	2014/10/1	ND(0.0017)	0.0057	ND(17) ^{*1}	ND(0.32)	ND(0.009)	ND(1.9)				S
M-104	2014/10/21	0.014	0.045		0.098	In progress					0.5m
	2014/9/12	0.030	0.094		0.15	0.0069					0.5m
F-P05	2014/11/10	ND(0.066)	ND(0.060)	0.03 ^{*2}	In progress	In progress			In progress	In progress	S
	2014/10/20	ND(0.062)	ND(0.058)	0.03 ^{*2}	ND(0.45)	In progress			In progress	In progress	S
	2014/9/16	ND(0.058)	ND(0.061)	0.04 ^{*2}	ND(0.42)	0.003			ND(8×10^{-6})	ND(8×10^{-6})	S
	2014/8/20	ND(0.056)	ND(0.061)	0.02 ^{*2}	ND(0.40)	0.002			ND(6×10^{-6})	ND(7×10^{-6})	S
	2014/7/7	ND(0.056)	ND(0.059)	0.04 ^{*2}	ND(0.41)	0.006			ND(7×10^{-6})	ND(7×10^{-6})	S
T-D9	2014/10/18	0.012	0.036						ND(4.8×10^{-6})	$(5.0 \pm 1.6) \times 10^{-6}$	S
	2014/10/2	0.0081	0.023	ND(17) ^{*1}	ND(0.32)	ND(0.008)	ND(1.9)				S
T-3	2014/10/16	0.093	0.26	ND(17) ^{*1}	ND(0.30)						S

Sea area between 2-20km radius from the NPS (2)

Sampling point	Sampling Date	Cs-134	Cs-137	S/B
S:2m below sea level				
B:2-3m above sea bottom				

Sea water radioactivity (Bq/L):

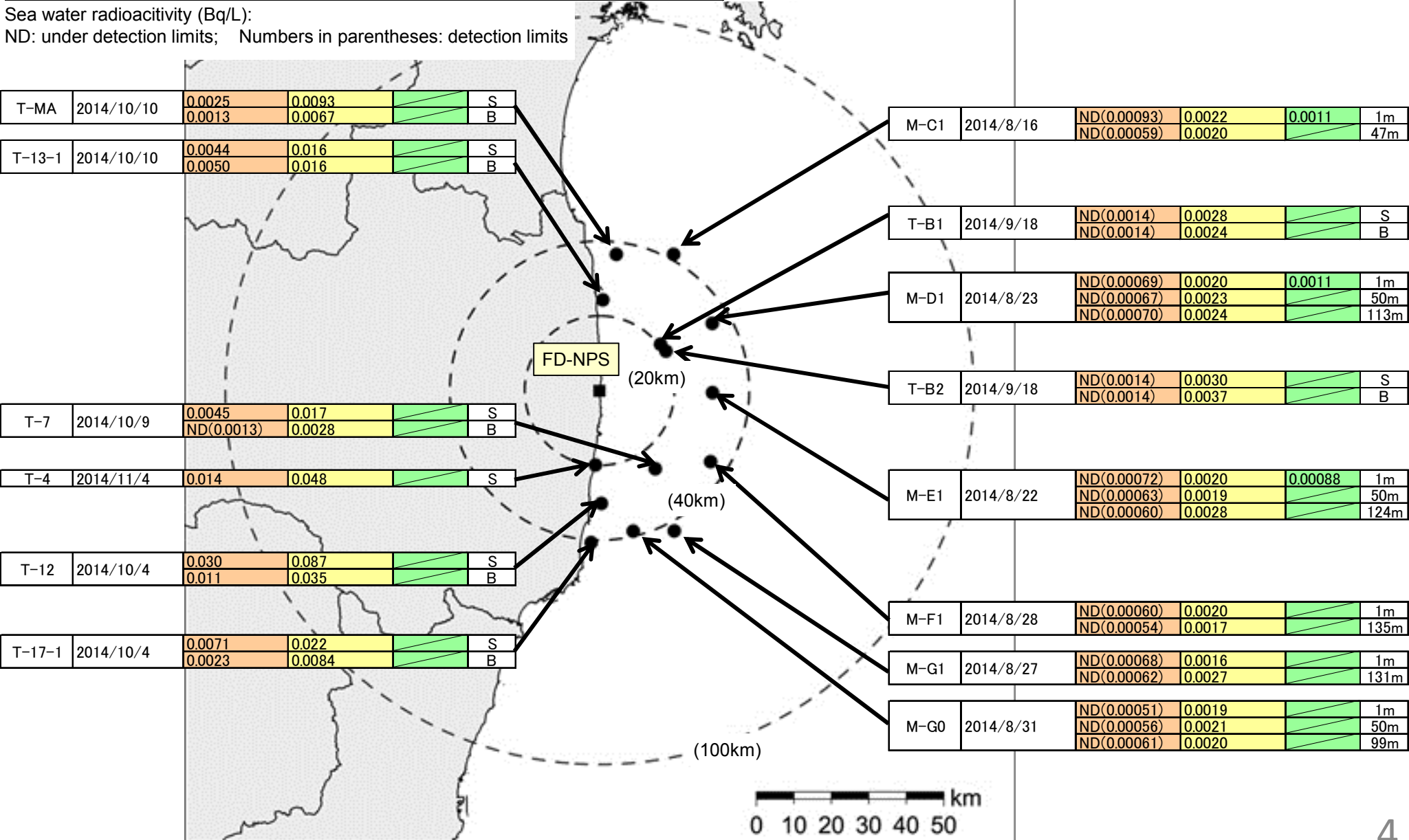
ND: under detection limits; Numbers in parentheses: detection limits



Sea area between 20-100km radius from the NPS(1)

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B	S:2m below sea level	B:2-3m above sea bottom
					Depth(m) from sea level		

Sea water radioactivity (Bq/L):
 ND: under detection limits; Numbers in parentheses: detection limits



Sea area between 20-100km radius from the NPS(2)

Sampling point	Sampling Date	Cs-134	Cs-137	Total β^*	H-3	Sr-90	S/B
							S:2m below sea level B:2-3m above sea bottom
							Depth(m) from sea level

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*Total β : excluding K-40

M-C3	2014/11/10	In progress	In progress	0.026	In progress	In progress	1m
	2014/8/16	ND(0.00069)	0.0020	0.021	0.10	0.00079	1m
		ND(0.00066)	0.0018				50m
		ND(0.00072)	0.0014			124m	

T-22	2014/10/10	0.0051	0.017				S
		0.0035	0.015				B

M-D3	2014/11/9	In progress	In progress	0.035	In progress	In progress	1m
	2014/8/23	ND(0.00058)	0.0018	0.025	0.10	0.00082	1m
		ND(0.00074)	0.0019				100m
		ND(0.00082)	0.0015			214m	

M-F3	2014/11/8	In progress	In progress	0.026	In progress	In progress	1m
	2014/8/21	ND(0.00054)	0.0012	0.026	0.098	0.00071	1m
		ND(0.00067)	0.0015				100m
		ND(0.00064)	0.0013			224m	

T-18	2014/10/9	0.0056	0.019				S
		0.0021	0.0093				B

T-20	2014/10/4	ND(0.0016)	0.0059				S
		0.0024	0.0090				B

T-M10	2014/10/9	ND(0.0013)	0.0018				S
		ND(0.0013)	0.0023				B

M-E3	2014/11/9	In progress	In progress	0.026	In progress	In progress	1m
	2014/8/21	ND(0.00067)	0.0026	0.029	0.073	0.00085	1m
		ND(0.00065)	0.0016				100m
		ND(0.00059)	0.0015			220m	

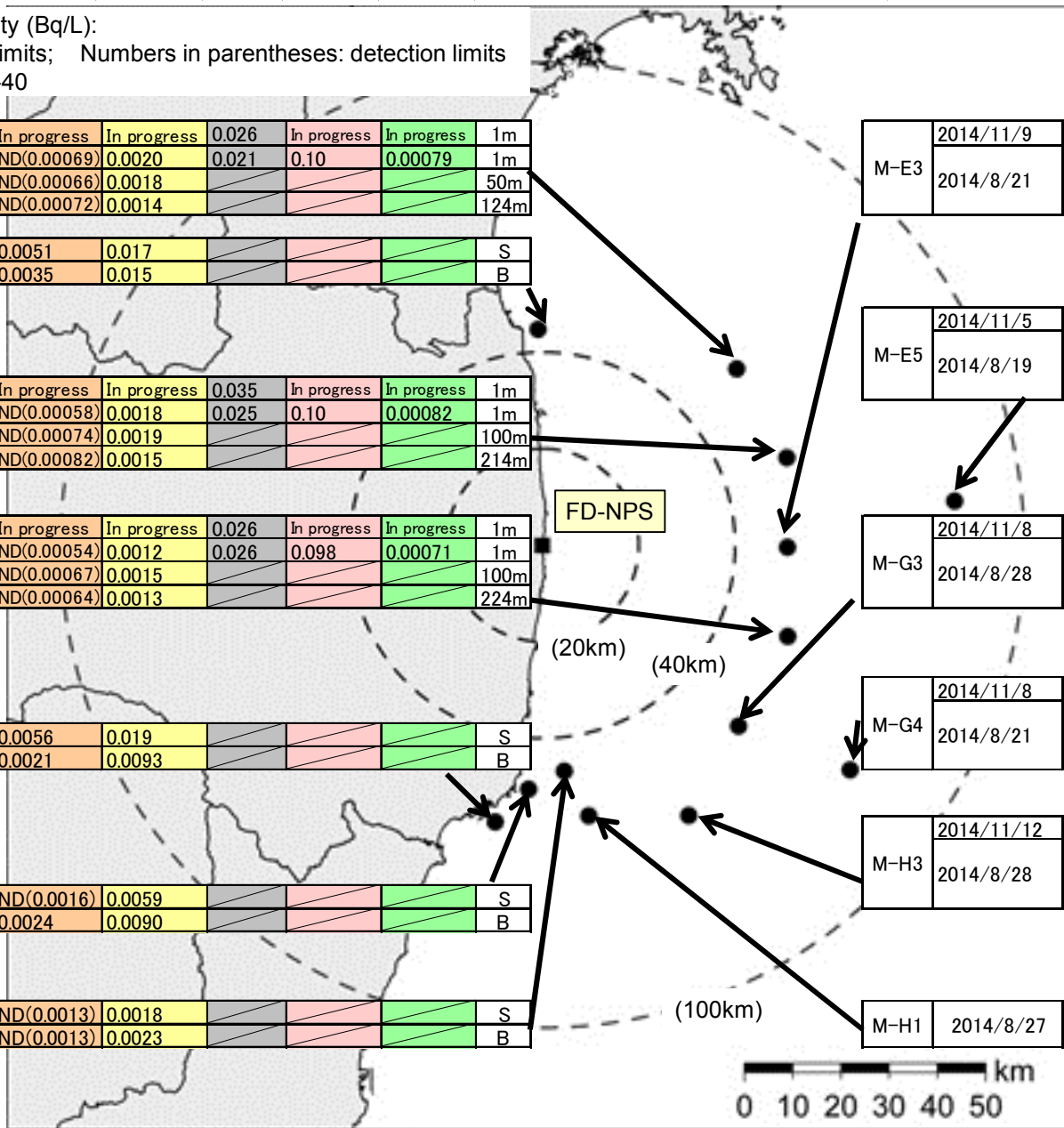
M-E5	2014/11/5	In progress	In progress	0.031	In progress	In progress	1m
	2014/8/19	ND(0.00058)	0.0013	0.025	0.095	0.00079	1m
		ND(0.00083)	0.0022				100m
		ND(0.00070)	0.00095			527m	

M-G3	2014/11/8	In progress	In progress	0.034	In progress	In progress	1m
	2014/8/28	ND(0.00081)	0.0017	0.022	0.10	0.00093	1m
		ND(0.00064)	0.0013				100m
		ND(0.00059)	0.0017			199m	

M-G4	2014/11/8	In progress	In progress	0.034	In progress	In progress	1m
	2014/8/21	ND(0.00075)	0.0019	0.024	0.062	0.00085	1m
		ND(0.00067)	0.0021				100m
		ND(0.00071)	0.00062			655m	

M-H3	2014/11/12	In progress	In progress	0.030	In progress	In progress	1m
	2014/8/28	ND(0.00060)	0.0019	0.025	0.065	0.00085	1m
		ND(0.00073)	0.0019				100m
		ND(0.00068)	0.0018			222m	

M-H1	2014/8/27	ND(0.00072)	0.0023				1m
		ND(0.00070)	0.0030				123m



Sea area along and off the coast of Miyagi Prefecture

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/M/B
----------------	---------------	--------	--------	-------	-------

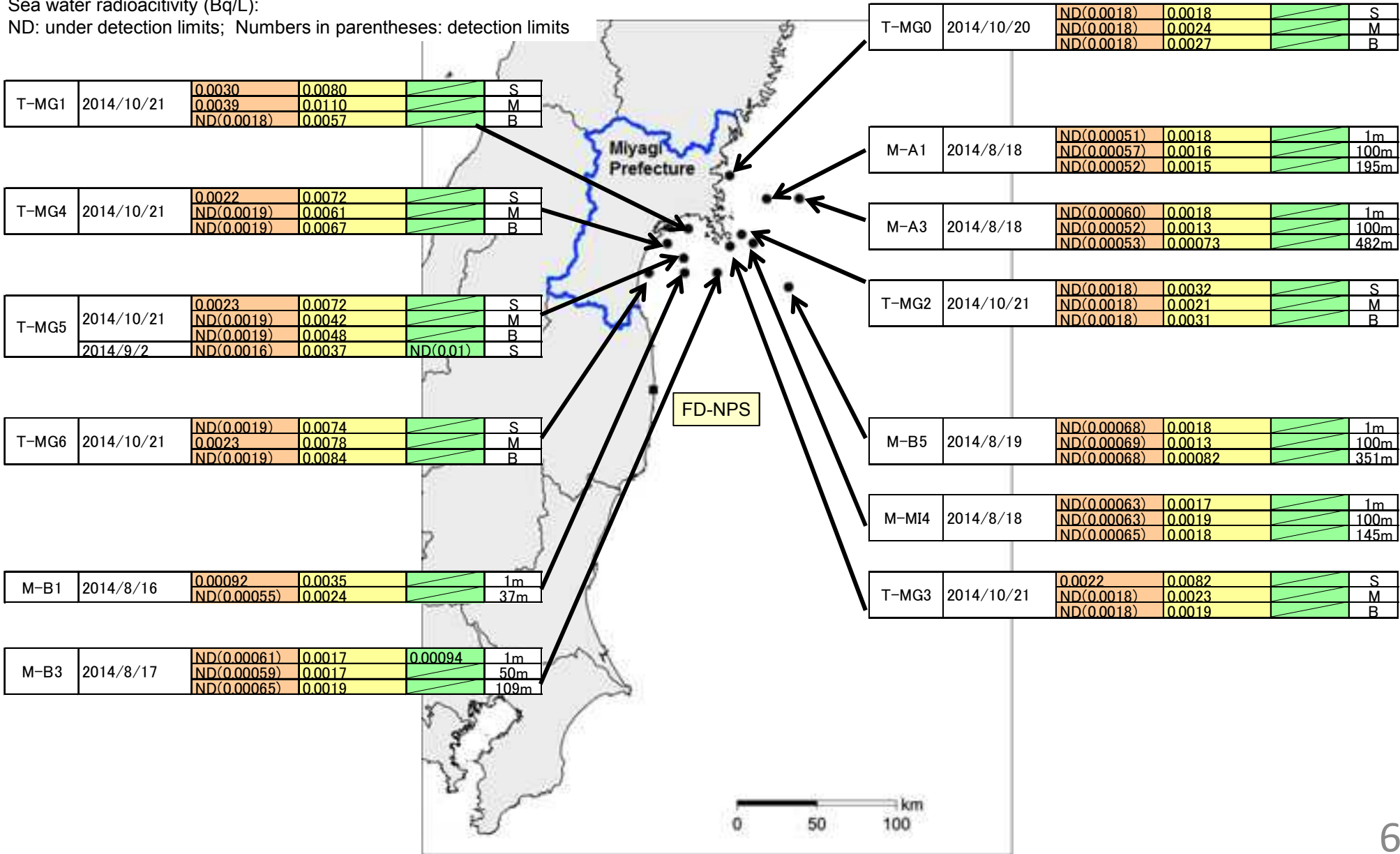
S:2m below sea level

M:between 2m below sea level and 2-3m above sea bottom

B:2-3m above sea bottom

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

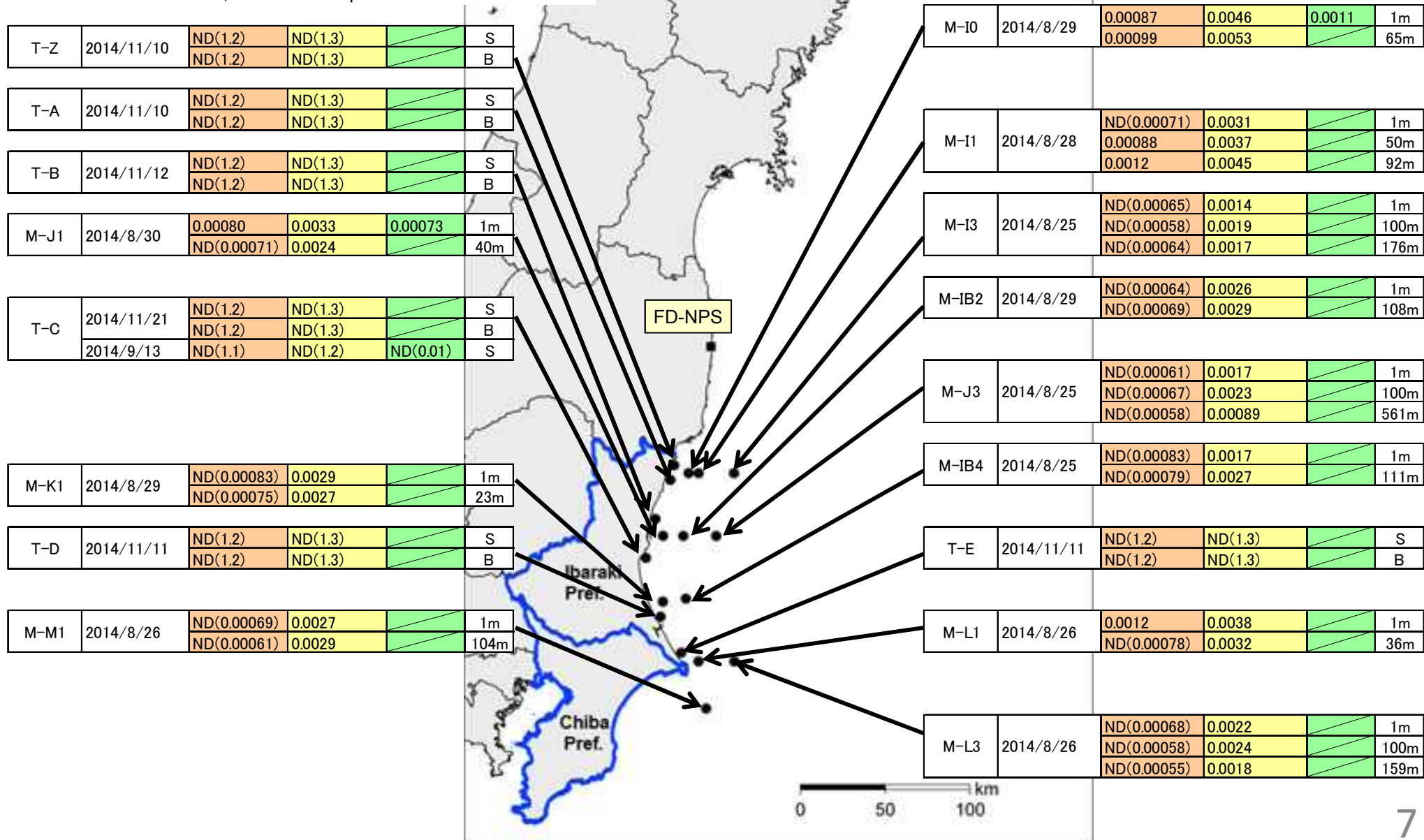


Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B	S:2m below sea level B:2-3m above sea bottom	
					Depth(m) from sea level		

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits



Open sea off the coast of Eastern Japan

Sampling point	Sampling Date	Cs-134	Cs-137	Depth(m) from sea level
----------------	---------------	--------	--------	-------------------------

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

M-10	2014/6/18	ND(0.00054)	0.0020	1m
		ND(0.00073)	0.0017	100m
		ND(0.00052)	0.0013	200m
		ND(0.00058)	0.0011	300m
		ND(0.00051)	0.00059	500m

M-14	2014/6/19	ND(0.00056)	0.0022	1m
		ND(0.00057)	0.0018	100m
		ND(0.00053)	0.0016	200m
		ND(0.00058)	0.00093	300m
		ND(0.00059)	0.00054	500m

M-19	2014/6/20	0.00095	0.0033	1m
		ND(0.00057)	0.0020	100m
		ND(0.00063)	0.0014	200m
		ND(0.00053)	0.0012	300m
		ND(0.00057)	0.00086	500m

M-20	2014/6/21	0.00067	0.0026	1m
		ND(0.00059)	0.0028	100m
		ND(0.00073)	0.0024	200m
		ND(0.00057)	0.0015	300m
		ND(0.00055)	0.00070	500m

M-25	2014/6/24	ND(0.00057)	0.0016	1m
		ND(0.00055)	0.0019	100m
		0.00069	0.0033	200m
		0.00097	0.0043	300m
		ND(0.00060)	0.0023	500m

M-11	2014/6/18	0.00062	0.0030	1m
		0.00078	0.0028	100m
		ND(0.00052)	0.0020	200m
		ND(0.00054)	0.0014	300m
		ND(0.00059)	0.0012	500m

M-15	2014/6/19	ND(0.00056)	0.0025	1m
		ND(0.00055)	0.0021	100m
		ND(0.00060)	0.0017	200m
		ND(0.00052)	0.0012	300m
		ND(0.00061)	0.00080	500m

M-21	2014/6/21	ND(0.00057)	0.0020	1m
		ND(0.00056)	0.0029	100m
		0.00063	0.0032	200m
		ND(0.00065)	0.0021	300m
		ND(0.00053)	0.0015	500m

M-26	2014/6/23	ND(0.00056)	0.0022	1m
		ND(0.00069)	0.0031	100m
		0.00099	0.0038	200m
		0.0013	0.0047	300m
		0.00066	0.0032	500m

M-27	2014/6/22	ND(0.00057)	0.0028	1m
		ND(0.00070)	0.0027	100m
		0.0010	0.0033	200m
		ND(0.00056)	0.0035	300m
		0.0011	0.0051	500m

